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SUMMARY: Army Estimate, 1953.  
U.S. ARMY MILITARY HISTORY INSTITUTE

1. This study was approved by the Deputy Chief of Staff, Plans and Research on 18 March 1953, with the following notation thereon:

"For planning purposes only within the Army Staff and exclusive of current operational considerations.

"In addition, if the subject is raised by other than Army agencies, study may be used as a basis for discussion in joint considerations. B. H. 18 March 53".

2. In further clarification of this approval, General Hanlett, Assistant for Planning Coordination in Office Deputy Chief of Staff, Plans and Research, on 20 March 1953 advised Col Stevens (OCSA), Col Reinford (G-1), and Lt Col Schiltz (G-1) that:

a. The term "Army Staff" should be interpreted as being inclusive of any subordinate Army staff for which such direction is necessary for mobilization and war planning purposes. Army Field Forces and Continental Army Headquarters are definitely in this category. Accordingly, such guidance will be reflected in AMP III.

b. The study provides the Army Member, JLPC, with a basis for further Joint Logistics Plans Committee discussion of rotation planning factors, standards and assumptions.

c. Factors developed in this study will be used by the Army in all future mobilization and war planning. When used in joint planning actions, it will be emphasized that unilateral Army factors rather than the 3.4 rotation factor are used.

d. The study will not be used in connection with current operational considerations.

Copy furnished:  
Col Stevens (OCSA)

*H. F. Schiltz*  
H. F. SCHILTZ  
Lt Col, GS  
Plans Division, G-1

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1 Chief of Staff

Plans Division, OACofS, G-1

20 Feb 53

Lt Col Schilts

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GE 381 TS AEMP

Army Rotation Study

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DISCUSSION:

1. Memorandum, Office Chief of Staff, subject: Briefing of Army Emergency War Plan (AEMP) dated 3 December 1952, directed that a study on Army Rotation be prepared, setting forth implications in connection with the following:

- a. Continuation of current joint rotation policies.
- b. Establishment of unilateral Army policy based on satisfactory equalization of morale problems vis-a-vis other Services.
- c. Using an intra-theater plan to remove combat personnel from front line duty before a morale problem develops.
- d. Using a theater zone-of-interior plan which will improve morale, but retain necessary individuals in XI military service in accord with Army personnel requirements.
- e. Consider both individual and unit rotation.

2. The attached study includes brief analyses of the jointly-agreed 3.4 Army rotation factor published in IPCM-509, the 1.7 unilateral Army factor approved for interim use in Army planning, unit rotation and a proposed Army plan.

3. It is concluded that:

- a. Any factor or factors used to project rotation requirements during a period of full mobilization should reflect a most realistic, austere program and equal treatment of all personnel throughout the Services.
- b. The 3.4 jointly-agreed factor is not valid for mobilization planning.
- c. The 1.7 unilateral Army interim factor can be revised downward to represent a more realistic and austere program.
- d. Unit rotation is not a feasible substitute for individual rotation during wartime.
- e. The primary basis for determining eligibility for rotation should be battle casualty experience with lesser consideration for other conditions of hardship peculiar to service in an overseas theater.
- f. Joint action or inter-Service agreements are required to ensure satisfactory equalization of morale vis-a-vis other Services.
- g. The proposed Army plan (Tab F) reflects an austere and realistic program and provides a sound basis upon which to develop joint action or to reach inter-Service agreements which will result in equal treatment of all military personnel throughout the Services.

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CG 381 TS AEMP

SUBJECT: Army Rotation Study

RECOMMENDATIONS:

1. That the conclusions and recommendations contained in Tab F be approved as representing the Army position for all future war planning.

2. That the criteria used and factors developed in the proposed Army plan be approved for presentation to the Joint Logistics Plans Committee or, if required, to the Joint Chiefs of Staff or Department of Defense.

COORDINATION:

G-3 - Concur - Col P. A. Roy, ext 71790

G-4 - Concur - Col P. A. Disney, ext 56477

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Army Rotation Study  
with Tabs A through H

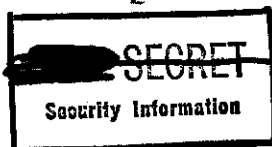
ROBERT N. YOUNG

Major General, GS

Assistant Chief of Staff, G-1

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### ARMY ROTATION STUDY

1. PROBLEM. To develop an Army position on the matter of rotation policies and factors to be used in future war planning.

2. ASSUMPTION. Any major war in which the United States will be engaged will be of such nature and duration that rotation of Army Personnel from certain oversea areas will be necessary in the interest of conservation of manpower and in meeting the demands of the public.

3. FACTS:

a. Approved joint-policy guidance on rotation, as contained in the Joint Logistics Policy and Guidance Manual, June 1952, is that for mobilization planning purposes the basic determinant of eligibility for rotation from overseas should be attrition rates or other definable conditions of hardship or hazard; that as a guide the following priorities may be used: (1) personnel in combat area; (2) personnel in combat-support area; and (3) personnel in noncombat area.

b. Joint Outline Emergency War Plan, July 1952, states that rotation policies contained in the Joint Logistics Policy and Guidance Manual (paragraph a above) are applicable.

c. Present unilateral Army policy reflects the joint policy and is expressed as follows:

(1) FM 101-1, the G-1 Manual:

(a) The primary purpose of rotation is the conservation of manpower. Experience factors in World War II indicate that after 120 days of sustained combat, the loss rate rises appreciably and that, after 180 days, the loss rate for veteran combat men even exceeds the loss rate for new replacements. Accordingly an exchange of new replacements for veteran combat men prior to the expiration of 180 days of combat will result in an over-all saving of manpower. Equally important will be an increased combat efficiency and an improved morale of front-line soldiers who are offered a reasonable chance for survival.

(b) The rotation plan will consist of rotation within theaters and rotation between oversea theaters and the continental United States.

(c) Normal oversea tours will be suspended on commencement of hostilities. Rotation from oversea theaters will not commence before commencement of hostilities plus six months, and then only when rotation replacements are available within the theater.

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(d) Depending upon the number of rotation replacements available, theater commanders will determine the criteria for rotation eligibility, giving priority to individuals with the greatest combat exposure.

(e) Theater commanders will establish intra-theater rotation to supplement rotation to the United States. The retraining, reassignment, and transfer of personnel between forward and rear areas will be exploited to the maximum.

(2) FM 31-15, Operations Against Airborne Attack, Guerrilla Action and Infiltration: Continuity in command and forces employed within rear area commands is essential. The rotation and relief of commanders and troops works to the advantage of subversive and guerrilla forces, and should be reduced to the minimum required for maintaining morale and conforming to existing theater rotation policy.

(3) Draft Army Emergency War Plan, 4 August 1952, prescribes that rotation replacements will be made available to combat theaters in sufficient number to offer the combat soldier a reasonable chance of survival. Front-line veterans equal in number to the rotation replacements received within the theater will be relieved from combat, retrained within the theater and reassigned to noncombat jobs. When sufficient front-line personnel have been rotated within the theater to create a surplus in the rear area, those excess with both long and hazardous service will be rotated to the United States.

(4) Army Mobilization Plan III provides that:

(a) The principal purposes of rotation are the conservation of manpower, an increased combat efficiency, and an improved morale of front-line soldiers who are offered a reasonable chance of survival.

(b) Experience factors of World War II indicate that after 120 days of sustained combat, the loss rate rises appreciably and that, after 180 days, the loss rate for veteran combat men even exceeds the loss rate of new replacements. Accordingly, an exchange of new replacements for veteran combat men prior to the expiration of 180 days of heavy combat will result in an over-all saving of manpower.

(c) The rotation plan will consist of rotation within theaters and rotation between overseas theaters and the continental United States. Normal overseas tours will be suspended on D-Day.

(d) Rotation from overseas theaters will not commence before D+6 months and then only when rotation replacements are available within the theater.

(e) Depending on the number of replacements available, the Department of the Army will determine the criteria for rotation eligibility, giving priority to individuals with the greatest combat exposure.

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(f) Theater commanders will establish intra-theater rotation to supplement rotation to the United States. The retraining, reassignment and transfer of personnel between forward and rear areas will be exploited to the maximum.

d. The Joint Logistics Plans Group disseminated to the Services LPM-509 of 12 September 1951, containing the Army jointly-agreed rotatee factor of 3.4 percent which, when applied to the overseas strength, gives the monthly rotation requirements. This factor is based on all Army personnel in the overseas theaters being eligible for rotation upon completion of an average two-year overseas tour of duty.

e. As a result of a decision by the Chief of Staff, U.S. Army, (Memorandum from OCS, subject: Army Mobilization Capabilities Study, file CS 320.2 (20 August 52) dated 20 August 1952) that the assumption of a two-year rotation for the Army is no longer considered practicable, the Army has requested the Joint Logistics Plans Group to reevaluate the factors and assumptions of LPM-509 to determine their realism.

f. As an interim measure, the rotatee factor of 1.7 percent is now being used by the Army for unilateral Army requirements planning.

#### 4. DISCUSSION:

a. Current Policies. Joint and unilateral Army policies, in recognizing the necessity for rotation, both provide for priority to be accorded those individuals subject to the more enervating and hazardous duties. Projection of these policies into service mobilization plans requires the use of certain planning criteria and factors which are, however, subject to examination for feasibility and adherence to established policy.

b. Utilization of the Joint-Agreed Army Rotatee Factor of 3.4. This factor was developed under assumptions (Tab A) which are considered to be generally in accordance with stated policies in that precedence for rotation of Army personnel is given to those who are expected to be most exposed to enemy action. There is no indication, however, that such precedence is commensurate with the degree of exposure. The Army jointly-agreed factor also is based on everyone in the overseas theaters being eligible for rotation to the Zone of the Interior after an average of 24 months' overseas duty.

c. Effect of the Joint-Agreed Army Rotatee Factor. Application of the 3.4 rotatee factor to the division mobilization and deployment schedule of the JOEWP, July 1952, establishes such a rotation load that by D+35 the Zone of the Interior Army structure is incapable of absorbing all rotatees (Tab B). By D+48 it is estimated that approximately 1,000,000 rotatees (average of 70,000 per month) in excess of the available Zone of the Interior spaces will have been returned to the Zone of the Interior. Generation of such excesses would leave two alternatives -- either discharges for the

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excess rotatees or changes in current plans which would provide for the utilization of all rotatees in advanced schools or additional organized units not now included in war plans.

(1) If discharged, the requirement to induct and train the necessary oversea replacements alone would, at D<sub>48</sub>, result in an increased Army end strength of over one-half million men. Total cost of the rotation program at D<sub>48</sub> would be around one million men.

(2) If all rotatees were retained in the Service and were stationed and trained in the Zone of the Interior for an average of ten months prior to reassignment overseas, it is estimated that an additional 900,000 men will have accrued to the total Army strength. Total cost of the rotation program at D<sub>48</sub> under this alternative would be approximately 1,900,000 men.

(3) Plans based on the support of rotation programs of this magnitude are considered to be unrealistic in view of the status of the nation's manpower pool and the demands upon it which may be expected during a wartime period. According to the latest Census Bureau estimate, for example, during fiscal years 1956, 1957 and 1958 the annual male accruals to the mobilization manpower pool (18-year olds) will be around 1,200,000. Assuming that 80 percent (current rate is 60 percent) will be available for duty in the armed forces, the manpower increase during these years would approximate only the increased requirement of the Army under the "discharge alternative" without any consideration for the increased requirements of the other Services.

(4) Accordingly, the 3.4 jointly-agreed factor is not considered to be a realistic planning factor.

d. Utilization of the Interim Factor of 1.7 for Unilateral Army Requirements Planning. This factor was approved for Army use in determining rotational requirements for unilateral Army planning. It is being used only as an interim measure pending development by the Army staff of more precise guidance and a review and reevaluation by the Joint Logistics Plans Group of the jointly-agreed factors and assumptions now published in LPM-509 (Tab C). Unlike the jointly-agreed factor, the 1.7 does not visualize everyone in the oversea theater being eligible for rotation after an average 24 months of oversea service. It does provide for the rotation from active oversea areas of combat and combat support personnel under the same criteria as the jointly-agreed factor.

e. Effect of the 1.7 Factor. Tab D shows the results of applying the 1.7 factor against the estimated oversea strength. It will be noted that there are no rotational discharges projected throughout the first three years. Should hostilities continue beyond that time, it is estimated that aggregate discharges (assuming discharge of those excess to Zone of the Interior requirements) through D<sub>48</sub> would be around 150,000 and amount to an average of 22,000 per month thereafter.

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(1) The requirement to induct and train the overseas replacements alone would at D48 result in a 129,000 estimated increase in the strength of the Army. Total cost of the rotation program at D48 would be approximately 420,000 men.

(2) If all rotatees were retained in the Service and were stationed and trained in the Zone of the Interior for an average of ten months prior to reassignment overseas, it is estimated that an additional 200,000 will have been added to the strength of the Army. Total cost of this rotation program at D48 would approximate 620,000 men.

(3) It is concluded, therefore, that although the 1.7 factor is more acceptable than the 3.4 jointly-agreed factor, it still generates manpower requirements of considerable magnitude.

f. Unit Rotation. A brief study (Tab E) indicates that rotation by complete units is not a feasible substitute for individual rotation under wartime conditions.

g. Proposed Plan (Tab F). None of the above plans is considered to be specifically tied-in with the most efficient utilization of personnel or uniformly to the degree of exposure to hazardous duty. The opinion is that during a wartime period any program for rotation eligibility should be based primarily on the intensity of combat, a precise measurement of which is the battle casualty experience. Such a concept is contained in the Joint Logistics Policy and Guidance Manual (paragraph 3a, supra) and under the General Assumption of LPGM-509. While the criteria may be the same, monthly rotation requirements would vary during periods of operation for each overseas theater. A reasonable forecast thereof would depend on the planned concept of operations, expected enemy resistance, number of troops in combat, etc., all of which would be reflected in estimated casualty data. The goal of such a system would be to provide as a minimum a 50 percent chance of survival for those bearing the brunt of the combat, with considerably less weight being given to those whose service is confined to the rear areas or noncombat overseas theaters. Such treatment is borne out by World War II experience when 89 percent of all battle casualties occurred forward of the battalion command posts, approximately 11 percent among troops generally employed between the battalion command post and the corps rear boundary and a negligible amount to the rear thereof. If such a condition were subject to a material change in a future war, the relief and/or return (rotation) allocation within the theater could be readily adjusted. The theater primary basis, however, would remain the same, i.e., battle casualty experience. The degree to which any plan could be implemented would, of necessity, depend on the availability of replacements and transportation. A simple and practicable plan based on these concepts is contained in Tab F.

h. Effect of Proposed Plan on Army Personnel. An analysis of the proposed plan shows that, if implemented, it would, on an austere basis, satisfy the conditions which are considered to demand relief and return of personnel to the Zone of the Interior.

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(1) It would provide for:

(a) The relief from combat of personnel operating habitually forward of ~~division~~ <sup>battalion</sup> command posts after an average 6.6 combat months. All personnel assigned for duty within this area would be relieved after seven combat months. Assuming that each division is fully engaged in combat 75 percent of the time in an active combat area and 25 percent of the time in a semi-combat area, the time spent in front-line combat prior to relief would be:

Combat Area	6 months average
Semi-combat area	18 months average

(b) The return to the Zone of the Interior of personnel relieved from front-line combat after an average 24 months' total elapsed time in the overseas theater.

(c) The return to the Zone of the Interior of personnel in the combat support zone (area between battalion command post and corps rear boundary) after an average 33 months in the overseas theater.

(d) The return to the Zone of the Interior of rear area personnel (rearward of corps rear boundary) and personnel in noncombat areas at the monthly rate of 0.5 percent of the strength in place by phase date.

(2) Theater monthly returns to the Zone of the Interior would be 0.5 percent of the ~~theater~~ <sup>overseas</sup> strength plus the number by which relief requirements (110 percent of the permanent Army battle casualties) exceed the reassignment capability of the rear area.

(3) Based on the current war plan this would result in the following over-all broad planning factors:

D/7	through D/24	- 0.8%
D/25	through D/36	- 0.6%
D/37	through D/48	- 1.2%
D/49	on	- 1.5%

(4) All returnees through the first four years of war could be reassigned to available Zone of the Interior operating forces of installations.

(5) Implementation of the program would result by D/48 in an estimated 284,000 increase in the strength of the Army.

1. Morale Effect of Proposed Plan vis-a-vis Other Services.

Although the primary consideration for any plan should be that it be realistic and within the expected personnel capability, it is necessary for reasons of morale and resulting public opinion that in operation, it will yield results for Army personnel essentially equal to those produced by other

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Service plans for their personnel. Accordingly, it would be unsound for the Army actually to implement this plan as opposed to the other Services returning personnel as envisaged under the jointly-agreed factors. Since the Services draw on the same limited manpower pool for personnel -- and the operation of any rotation (relief and return) system necessarily means additional personnel requirements -- it is considered necessary that the Service programs be established on a uniform basis and reflect equitable treatment of all military personnel (Tab G). The plan, however, is considered to be realistic for planning purposes in that it has been developed under the guiding principle of austerity and reflects estimated minimum essential personnel requirements.

(1) As a minimum, personnel of all Services deployed in the same area under similar operating conditions (Naval Port vs Army Port; Air Force ground personnel vs Quartermaster Packaging Company personnel, etc.) should become eligible for return to the Zone of the Interior after like periods of service.

(2) Satisfactory equalization of morale problems would require:

(a) Agreement among the Services that the basic determinant of eligibility for rotation (relief and return to the Zone of the Interior) should be battle casualty experience -- the exposure to hazardous duty.

(b) Adherence throughout the Department of Defense (regardless of Service) to a basic policy that precedence for return to the Zone of the Interior will be assigned personnel commensurate with the degree of exposure to enemy action.

(c) Elimination in Service plans of references inferring that personnel habitually stationed in rear areas or noncombat theaters will be eligible for return to the Zone of the Interior after certain limited prescribed tours.

(d) Adjustment by the other Services of rotatee planning factors commensurate with the Army concept.

j. A comparison of estimated manpower costs under the 3.4 factor, the 1.7 factor and the proposed Army plan (Tab F) follows:

COMPARISON OF MANPOWER COSTS AT DATE INDICATED\*  
(All figures in thousands)

Date	<u>Jointly-Agreed Factor</u>	<u>Interim Factor</u>	<u>Proposed (Tab F)</u>
D-12	128	70	42
24	168	91	42
30	235	124	60
36	797	221	144
48	990	422	284

\* Increase in ceiling strength of the Army

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NOTES: Basis for the above comparisons is the Division Mobilization and Deployment Schedule of the JOEWP, 1 July 1952 [REDACTED].

a. It is assumed that an optimum amount of intra-theater relief and reassignment is projected in the proposed Army plan (Tab F). The relief costs, therefore, are the same for each. Differences are due to increased number of returnees and discharges. In this comparison, returnees excess to the requirements of the Zone of the Interior operations are discharged.

#### 5. CONCLUSIONS.

a. Any factor or factors used to project rotation (relief and return) requirements during a period of full mobilization should reflect a most realistic, austere program and equal treatment of all personnel throughout the Services.

b. The 3.4 jointly-agreed factor is (not) valid for mobilization planning.

c. The 1.7 unilateral Army interim factor (can) be revised downward to represent a more realistic and austere program.

d. Unit rotation is not a feasible substitute for individual rotation during wartime.

e. The proposed Army plan (Tab F) reflects an austere and realistic program.

f. Joint action or inter-Service agreements are required to insure satisfactory equalization of morale vis-a-vis other Services.

g. The Army plan (Tab F) provides a sound basis upon which to develop joint action or reach inter-Service agreements which will reflect equal treatment of all uniformed personnel throughout the Services.

#### 6. RECOMMENDATIONS.

a. That the conclusions and recommendations contained in Tab F be approved as representing the Army position for all future war planning.

b. That the criteria used and factors developed in the proposed Army plan be approved for presentation to the Joint Logistics Plans Committee or, if required, to the Joint Chiefs of Staff or Department of Defense.

#### 8 Incls

Tab A - LPGM-509 Factors

Tab B - Rotation under JOEWP, Jul 52

Tab C - SS to C/S fm G-1, 12 Dec 52

Tab D - Rotation under JOEWP, Jul 52 [REDACTED]

Tab E - Unit Rotation

Tab F - Proposed Army Plan w/2 Incls

Tab G - DF to Army Member JPIC, 3 Feb 53, w/1 Incl

Tab H - Charts

Tab A

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LPGM-509 FACTORS

1. The following factors are extracted from Appendix to Enclosure to LPGM-509, 12 September 1951.

BROAD PERSONNEL PLANNING FACTORS \*\*\*\*

<u>TYPE AREA</u>	<u>US ARMY</u>	<u>US NAVY &amp; MARINE CORPS</u>	<u>US AIR FORCE</u>
1. <u>Combat Area</u>			
a. Replacements*			
x x x			
(3) Rotatee	3.4	3.0***	3.2
2. <u>Semicombat Area</u>			
x x x			
(3) Rotatee	3.4	3.0***	3.2
3. <u>Noncombat Area</u>			
a. Replacements*			
x x x			
(3) Rotatee	3.4	3.0	3.2

\* In percent per month of total overseas-deployed personnel.

\*\*\* When used for computing transportation requirements, it should be assumed that 50% of the afloat rotatees will be moved in fleet units and will not constitute outside requirements.

\*\*\*\* These factors are for application each month against total deployed strength in place by type area and phase date.

2. The following are extracts from the Memorandum itself:

a. From paragraph 2. The revised factors herein are primarily for logistic feasibility tests to be accomplished within the Joint Staff. They are designed for use in the development of over-all manpower requirements, including personnel required as replacements which affect the development of overseas transportation requirements. These factors, as such, will not necessarily be used by the Services for detailed planning under any mobilization plan. They will, however, yield results comparable to those developed for the Services and may be used for purposes of review of Service-developed requirements applicable thereto.

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b. From paragraph 3. The x x x factors are those submitted by the respective Services, while the rotatee factors were developed by the Joint Logistics Plans Group.

c. Paragraph 5. The policy assumptions in the Enclosure regarding Service personnel rotation were developed for the purpose of providing a foundation on which computations for a rotation factor could be based. Such policy assumptions are not to be construed as binding on the Services or the Joint Staff in implementing rotation at any future date.

3. The following are extracts from the Enclosure to the Memorandum:

a. Paragraph 1g. Rotatees: Military personnel who, after a Service-prescribed tour of duty, are returned to the "Zone of the Interior" and on whom full use may be planned by the respective Services within two months after return. "Equitable personnel exchange" between the "Zone of the Interior" and the area concerned may be used to describe the action involved.

b. Paragraph 1i.

(1) Combat Area. One involving action with the enemy on a continuing basis.

(2) Semicombat Area. One involving action with the enemy on a sporadic basis.

(3) Noncombat Area. One involving action with the enemy on a very infrequent, if any, basis.

c. Paragraph 2e. The factors are equally valid for broad planning purposes by the Services or the Joint Staff.

d. Paragraph 3. Overseas Personnel Rotation

a. General Assumptions

(1) All personnel deployed on D-day to be frozen overseas from D-day to D+6 months and rotated to the "Zone of the Interior" between D+6 months and D+24 months in equal monthly increments. Personnel deployed after D-day, except as otherwise noted below, to be eligible for rotation on completion of 24 months overseas.

(2) Rotation eligibility to apply equally to personnel deployed in all overseas areas.

(3) Separates and evacuee replacements not to require rotation as such and, therefore, for rotation computations, to be subtracted from "augmentations" requiring rotation 24 months later.

(4) Personnel replacements for rotatees will be available (phased back) for shipping purposes one month prior to phase date on which required.

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(5) Rotation precedence will be assigned personnel commensurate with the expected degree of exposure to enemy action.

(6) All replacements for rotatees will require "logistic support" shipping (this being the sole reason for their inclusion in factors) except that 50% of the U. S. Navy "afloat" replacements will be transported by augmenting fleet units.

b. Specific Assumptions

(1) U. S. Army

All personnel deployed after D-day will be eligible for rotation after an average of 16, 18 and 24 months when deployed in combat, semicombat, and noncombat areas, respectively. These averages assume that Army personnel in combat zones will be rotated after 6 "combat months"; in communication zones will be rotated after 12 "months"; and in rear zones after 24 "months". In a semicombat area, or noncombat area, the same principles will apply; but it will of course take longer to gain the required credits.

(2) U. S. Navy and Marine Corps

(a) Personnel deployed afloat will be rotated at 2.5% per month of the deployed afloat total to provide for the manning of new and reactivated ships. Fifty percent of the afloat rotation replacements will be shipped in fleet units. The remaining 50% requiring "logistic support" shipping constitutes the afloat portion of the rotation factor.

(b) Personnel deployed ashore after D-day will be eligible for rotation after an average of 24 months overseas.

(c) While U. S. Marine Corps rotation policy for ground personnel in months will be comparable to that for the U. S. Army, their requirement is included in the over-all U. S. Navy factor for feasibility test purposes.

(d) Deployed flight personnel will be eligible for rotation after an average of six months, nine months and eighteen months in the combat, semicombat and noncombat areas respectively.

(3) U. S. Air Force

(a) Flight personnel deployed will be eligible for rotation after an average of eight months overseas.

(b) Ground personnel deployed will be eligible for rotation after an average of 24 months overseas.

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TAB A

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#### 4. Analysis of Assumptions and Factors

##### a. General Assumptions:

(1) The assumption, applicable to all Services, that there will be no rotation for the first six months appears to be reasonable. The assumption that all personnel overseas on D-Day will be rotated to the Zone of the Interior between D/6 and D/24, however, does not recognize differences in theaters or differences in operations within theaters. Personnel from Hawaii and Puerto Rico would be rotated at the same rate as those in EUCOM; those in the United Kingdom at the same rate as those on the European continent. The statement that "Personnel deployed after D-Day, except as otherwise noted below, to be eligible for rotation on completion of 24 months overseas" is believed to be in error as specific assumptions indicate the 24 months as an average. By Chief of Staff, U. S. Army decision (reflected in Tab C), however, this term of duty is no longer considered practicable. The assumption, therefore, is not valid for Army planning.

(2) The assumption that rotation eligibility will apply equally to personnel in all overseas areas requires clarification. The established criteria should apply equally, but the resulting tours of duty required to establish rotation eligibility will differ.

(3) The general assumption that rotation precedence will be assigned personnel commensurate with the expected degree of exposure to enemy action is considered to be sound. A review of the published factors, however, with information (casualty experience of World War II and Korea) considered to reflect "degree of exposure to enemy action" does not produce evidence that this assumption was followed, particularly in inter-service computations.

##### b. Specific Assumptions:

<u>Number of Months Overseas</u>				
	<u>Combat Area</u>	<u>Semicombat Area</u>	<u>Noncombat Area</u>	<u>No area Specified</u>
<u>Army</u>	16*	18	24	
<u>Navy</u>				
Ashore				24
Afloat				2.5% deployed
Flight	6	9	18	afloat
<u>Marine</u>				
Ground	Comparable to U. S. Army**			
Flight	6	9	18**	
<u>Air Force</u>				
Ground				24
Flight				8

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\*Combat zone - 6 "combat months". Communication zone - 12 "months".  
Rear zones - 24 "months". It will take longer to gain required credits  
in semicombat or noncombat areas.

\*\*Navy has recommended this be changed to 24 months for ground personnel,  
and 12 months for flight personnel except those aboard carriers, with no  
area specified.

It is evident that if the Army considers it impracticable to rotate  
everyone in the overseas theater after an average 24 months tour of duty,  
and equality of treatment is planned for all members of the Armed Services,  
then the 24 months average time overseas for all Services must be changed.  
This change would, necessarily, change any overall factors.

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Tab B

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ROTATION UNDER JOEMP, JULY 1952

Based on Jointly-Agreed Factor of 3.4% of Overseas Strength

1. The following pertains to the rotation discharges under the Mobilization and Deployment Schedule of JOEMP, 1 July 1952,   
 Computations are based on 440,000 ZI structure spaces (70% of total 628,000 planned in AMP II) being available for the reassignment of returnees after all divisions have been mobilized. Prior to that time it is assumed that a minimum of 25,000 spaces per division force mobilized can be filled by returnees being assigned to new units. Assumption is that there will be no rotation prior to D+.

DATE	DIVISIONS MOBILIZED	RETURNEES LV FROM OVERSEAS	RETURNEES AVAIL ASSIGNMENT ZI	RETURNEES ASSIGNED ZI	RETURNEES DISCHARGED
(in thousands of individuals)					
D/7	26	23.8			
8	27	25.6			
9	28	23.8	23.6	23.6	
10	30	25.6	25.3	25.3	
11	32	30.6	23.6	23.6	
12	35	32.4	25.3	25.3	
13	38	32.4	30.3	30.3	
14	41	32.4	32.1	32.1	
15	44	32.4	32.1	32.1	
16	47	32.4	32.1	32.1	
17	50	32.4	32.1	32.1	
18	53	32.4	32.1	32.1	
19	56	34.0	32.1	32.1	
20	59	35.8	32.1	32.1	
21	62	37.4	33.7	33.7	
22	65	40.8	35.4	35.4	
23	68	42.6	37.0	37.0	
24	71	44.2	40.4	40.4	
25	74	46.0	42.2	42.2	
26	77	47.6	43.8	43.8	
27	79	49.4	45.5	45.5	
28	80	52.8	47.1	47.1	
29	80	57.8	48.9	48.9	
30	80	63.0	52.3	52.3	
31	80	68.0	57.2	57.2	
32	80	73.2	62.4	62.4	
33	80	78.2	67.3	67.3	
34	80	83.4	72.5	72.5	
35	80	88.4	77.4	64.0	13.4
36	80	93.6	82.6	2.2	80.4
37	80	98.6	87.5	2.2	85.3
38	80	103.8	92.7	23.2	69.5
39	80	108.8	97.6	48.7	48.9
40	80	114.0	102.8	51.9	50.9

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<u>DATE</u>	<u>DIVISIONS</u> <u>MOBILIZED</u>	<u>RETURNEES LV</u> <u>FROM OVERSEAS</u>	<u>RETURNEES AVAIL</u> <u>ASSIGNMENT ZI</u>	<u>RETURNEES</u> <u>ASSIGNED ZI</u>	<u>RETURNEES</u> <u>DISCHARGED</u>
		(in thousands of individuals)			
D/41	80	119.0	107.7	56.5	51.2
42	80	124.2	112.9	61.5	51.4
43	80	129.2	117.8	66.1	51.7
44	80	134.4	123.0	71.1	51.9
45	80	136.0	127.9	63.0	64.9
46	80	136.0	133.1	4.3	128.8
47	80	136.0	134.6	4.3	130.3
48	80	136.0	134.6	24.2	110.4
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Tab C

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1 Approval

1 Chief of Staff

Plans Division, ACOFS, G-1

Lt Col Schiltz x77409

12 Dec 1952

GI 210.31 (TS)

Mobilization Planning Factor for Rotational  
Requirements

DISCUSSION:

1. Joint Logistics Plans Group Memorandum, LPGM-509, subject: "Review of Joint Service Rotation, Overstrength, and Replacement Factors" contains a jointly-agreed planning factor for rotation of 3.4% per month of the total overseas deployed personnel of the Army. This factor, which has been used in Army mobilization requirements planning, was considered to be too high following a review of the 11 July 1952 Army Mobilization Capabilities Study. Specifically, it was stated that one of the basic assumptions upon which this factor was developed--the assumption of a two-year rotation--is impracticable.

2. As the 3.4% factor is a jointly-agreed factor developed purportedly on the basis of certain criteria applicable to all Services, an effort has been made by the Assistant Chief of Staff, G-1, to have the rotation assumptions and factors for all Services reviewed to reflect a more feasible program. A solution is not expected in the immediate future.

3. As an interim measure, the approved assumptions for the 15 January 1953 Army Mobilization Capabilities Study contain the provision that monthly rotational requirements will be 1.7% of the overseas strength. This is considered to allow the combat soldier a reasonable chance of survival and will eliminate the requirement for rotating everyone upon completion of an average 24 months overseas tour.

4. A detailed study on rotation is being prepared.

RECOMMENDATION:

That pending completion of the rotation study currently being made by the Army Staff and resolution of the divergent views on the factors expressed in Joint Logistics Plans Group Memorandum (LPGM-509) the following factors, expressed in percentage of overseas strength eligible each month for return to the Zone of the Interior, be approved for mobilization requirements planning purposes:

- a. Joint Planning - 3.4%
- b. Unilateral Army Planning - 1.7%

COORDINATION:

G-3- Concur. Col P. A. Roy - ext 71790

G-4- Concur. Col George O. N. Loden - ext 56400

Approval-DC/S Plans & Research  
M. E. S. 27 Dec 52

A. C. McAULIFFE  
Lieutenant General, GS  
Assistant Chief of Staff, G-1

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TAB C



Tab D

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ROTATION UNDER JOEMP, July 1952

Based on Interim Factor of 1.7% of Overseas Strength

1. The following pertains to the rotation discharges under the Mobilization and Deployment Schedule of JOEMP, 1 July 1952, [REDACTED]. Computations are based on 440,000 ZI structure spaces (70% of total 628,000 planned in AMP II) being available for the reassignment of returnees after all divisions have been mobilized. Prior to that time it is assumed that a minimum of 25,000 spaces per division force mobilized can be filled by returnees being assigned to new units. Assumption is that there will be no rotation prior to D+7.

DATE	DIVISIONS MOBILIZED	RETURNEES LV FROM OVERSEAS	RETURNEES AVAIL ASSIGNMENT ZI	RETURNEES ASSIGNED ZI	RETURNEES DISCHARGED
		(in thousands of individuals)			
D+7	26	11.9			
8	27	12.8			
9	28	11.9	11.8	11.8	
10	30	12.8	12.7	12.7	
11	32	15.3	11.8	11.8	
12	35	16.2	12.7	12.7	
13	38	16.2	15.1	15.1	
14	41	16.2	16.0	16.0	
15	44	16.2	16.0	16.0	
16	47	16.2	16.0	16.0	
17	50	16.2	16.0	16.0	
18	53	16.2	16.0	16.0	
19	56	17.0	16.0	16.0	
20	59	17.9	16.0	16.0	
21	62	18.7	16.8	16.8	
22	65	20.4	17.7	17.7	
23	68	21.3	18.5	18.5	
24	71	22.1	20.2	20.2	
25	74	23.0	21.1	21.1	
26	77	23.8	21.9	21.9	
27	79	24.7	22.8	22.8	
28	80	26.4	23.6	23.6	
29	80	28.9	24.5	24.5	
30	80	31.5	26.1	26.1	
31	80	34.0	28.6	28.6	
32	80	36.6	31.2	31.2	
33	80	39.1	33.7	33.7	
34	80	41.7	36.2	36.2	
35	80	44.2	38.7	38.7	
36	80	46.8	41.3	41.3	
37	80	49.3	43.8	43.8	
38	80	51.9	46.3	46.3	
39	80	54.4	48.8	48.8	

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TAB D

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<u>DATE</u>	<u>DIVISIONS</u> <u>MOBILIZED</u>	<u>RETURNEES LV</u> <u>FROM OVERSEAS</u>	<u>RETURNEES AVAIL</u> <u>ASSIGNMENT ZI</u>	<u>RETURNEES</u> <u>ASSIGNED ZI</u>	<u>RETURNEES</u> <u>DISCHARGED</u>
D/40	80	57.0	51.4	51.4	
41	80	59.5	53.9	53.9	
42	80	62.1	56.4	55.0	1.4
43	80	64.6	58.9	34.2	24.7
44	80	67.2	61.5	36.6	24.9
45	80	68.0	64.6	39.0	25.6
46	80	68.0	66.5	41.4	25.1
47	80	68.0	67.3	43.8	23.5
48	80	68.0	67.3	46.2	21.1
					<hr/> 146.3

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Tab E

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## UNIT ROTATION

1. The following brief analysis indicates that any rotation in a major war must be considered as being individual. This will be necessary because of the normally large turnover in the units to which the rotation criteria is most applicable -- the front-line infantry.

2. World War II experience shows that the rifle companies of an infantry regiment in combat suffered 7.8% permanent battle casualties per month; that after six and one-half months in combat only about 50% of the original company was of further use to the Army. Considering other personnel temporarily hospitalized or lost for nonbattle reasons, few of the original personnel will remain. Other personnel in the unit (replacements) will have accrued varying lengths of combat service. Relief of the entire unit from front-line duty would necessitate the reassignment to other combat units of those personnel not yet eligible for relief.

3. Unit replacements could be furnished for relieved units by increasing the training time now allowed for individual replacements. Based on a minimum of two months additional time for unit training and relief requirements based on offering the combat soldier a 50% chance for survival, it is estimated that the increased Army strength required only to replace front-line units would at D+48 approximate 120,000 in addition to the personnel costs estimated for the proposed Army plan (Tab F). The direct personnel costs of making replacements of all types (battle, nonbattle and rotation) by organized units to combat companies is estimated at 300,000 by D+48.

4. It appears that the main advantage of unit replacement would be the initial higher morale of the replacement unit. Adverse morale effects may be expected from those not eligible for relief who must be reassigned to other combat units which have been in line for varying periods. This reassignment problem as well as the necessity for some returns to the United States from other than combat units will require individual relief and return (rotation) to complement the unit program. While unit replacement on a small scale such as the four-man team concept is believed to be practicable, replacement by company, battalion and regiment may result in an entirely untried unit being prematurely committed beyond the capability of unseasoned troops.

5. It is concluded that the return to the United States of a unit, except in accordance with operational requirements, is indefensible unless that unit is stripped of all personnel of short overseas service and filled with individuals of the longest and most hazardous service. Such a mass shipment of personnel would diminish the effectiveness of all units involved. It would result in a net loss to the theater of the returning units' accumulated know-how and knowledge of local conditions both of which are characteristic of a successful unit in combat. Unit rotation is not considered to be a feasible substitute for individual rotation.

TAB E

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Tab F

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PROPOSED ARMY PLAN

1. It is axiomatic that the support of any form of rotation will require increased numbers of trained replacements and that the timely production of these rotation replacements will require detailed planning, increased induction and additional training facilities.

2. In a peacetime Army or in the present state of partial mobilization many considerations necessarily influence the rotation plan. Among these are severity of climate, isolation, poor general living conditions, absence from dependents, political necessity, or just separation from the usual American environment. However, in a war for national survival, a rotation system may only be justified on the basis of the ultimate conservation of manpower. Increased morale, better public relations, and increased efficiency must be accepted as by-products of such a rotation system, but should not be considered as the main bases. Against a numerically superior enemy and in consideration of our limited manpower resources, it is evident that rotation must be on a modest basis. The minimum requirement appears to be that it offer the combat soldier a reasonable chance of survival. To include length of overseas service, nonbattle casualty rate, unpleasant or intemperate climatic and other conditions among the bases for determining eligibility, will increase the number eligible for return to the United States, or if that number is fixed, will reduce the chance of survival of the combat soldier. This study, therefore, is developed on the thesis that eligibility for relief and return to the Zone of the Interior will be based primarily on the intensity of combat, a precise measurement of which is the battle casualty experiences; and that reassignments of individuals away from unpleasant and isolated posts, such as weather stations and communication installations, are matters to be resolved by individual command action. Relief based on battle casualty rates is in direct proportion to the hazard and intensity of combat. It ignores environmental factors such as severe climatic conditions and war-induced sickness such as frostbite, trench foot, sub-standard facilities, psychoneurosis and malaria. It must be assumed, however, for broad planning purposes, that military personnel deployed in an area will be properly trained, equipped and medically protected. In this respect, World War II statistics indicate a fixed relationship between battle and nonbattle casualties. If such is not the case in a future war, then the current factor or factors can be weighted by the nonbattle casualty rate. While the criteria may be the same for all troops, deployed overseas, relief and return requirements will differ during periods of operation for each overseas theater. A reasonable forecast thereof depends on the planned concept of operations, expected enemy resistance, number of troops in combat, etc., all of which are reflected in estimated casualty data. It is emphasized that chance of survival as determined from casualty data is merely the basic unit of measure used to compute estimated relief requirements. Promulgation of criteria, however, in terms of chance of survival is considered to be psychologically unsound for general consumption. Under actual conditions it is believed that rotation eligibility for Army personnel must be stated in terms of a time element.

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3. In arrival at a reasonable or fixed percentage chance of survival for the individual, consideration of the enemy threat to our national survival will be paramount. Any percentage chosen must be considered as arbitrary and subject to change due to the intensity of enemy action or threat to our existence. It would appear, however, that a 50 percent chance of survival for those bearing the brunt of the combat (Final Report, Project VISTA) is reasonable for planning purposes and should be the minimum goal of any plan. The number of combat soldiers who must be relieved and reassigned to less hazardous duty when 50 percent of the original group will have been killed in action, missing, captured, severely wounded, or died of wounds can be readily calculated. This will equal the estimated number of replacements directly required to support relief from combat. Details of such a calculation are included in paragraph 2 of Inclosure 1.

4. To be effective, rotation must be based on an intra-theater system of relief, retraining, and reassignment of front-line combat veterans to less hazardous duty. Only through utilization of these combat veterans within the theater can maximum manpower economy be realized. Optimum intra-theater relief and reassignment, therefore, is an important element of the plan. Its success depends on the development of realistic supporting plans to assimilate those relieved combat soldiers into rear-area jobs without jeopardizing the rate and quality of support. In this respect it is accepted that individual intra-theater reassignments will generally be from front to rear, with definite provisions to utilize in combat those rear-area individuals who volunteer for front-line duty. The resulting instability created in rear-area units and installations, plus morale implications and the abnormal retraining and administrative problems, do not appear to justify plans based on the involuntary reassignment of rear-area personnel to combat units. It must be recognized, however, that such a requirement may develop. Adherence to this plan means that the rear-area units will remain relatively stable, enabling them to train many of their own specialist replacements within the unit, while at the same time receiving some relieved front-line personnel who possess the required specialties. Accordingly, the requirement for school-trained personnel from the United States should be decreased, with the result that the great majority of replacements shipped overseas, exclusive of highly trained specialists, WAC's and marginal (physical profile C) personnel, can be trained for the combat arms. Computations considered to reflect a realistic estimate of the ability of theater-bulk overhead and rear-area units to assimilate relieved combat troops are included in paragraph 4 of Inclosure 1. In general, it is visualized that retrained combat veterans can be utilized in rear areas to replace the bulk of the rear-area attrition losses, to fill newly authorized noncombat units within the theater and to augment theater overhead as the strength of the theater increases. In addition, many noncombat units deployed overseas after D+6 can be shipped at reduced strengths, at cadre strength, or as type B units to be filled in the overseas theater by relieved personnel. Relieved combat personnel

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Tab F



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will be immediately returned to the theater replacement command, given appropriate rest and recuperation leave, be retrained as necessary and reassigned, or be reassigned immediately for on-the-job training. These new assignments will be to rear-area units and installations of a relative secure nature.

5. Despite the overseas utilization of relieved combat personnel, an excess to the theater rear-area replacement requirement will develop. This might be due to an excess in numbers, mal-distribution of grades or any number of conditions which would not allow for all relieved front-line veterans to be utilized profitably in the rear areas. The return to the United States of a reasonable number of these veterans, even during the early stages, is desirable as it will prevent a large backlog of eligibles from developing within the overseas theater, while at the same time permitting the early use in the United States of combat veterans as cadres for new units, to fill officer candidate and long-lead time specialists quotas and as training instructors.

6. This plan visualizes that, barring emergency replacement requirements, a minimum of one year will have elapsed between the time a returnee leaves the overseas area and his reassignment outside the continental United States. Reassignment of returnees to an overseas theater, particularly a combat theater, may be expected to be most unpopular among both soldiers and the public. If started early in the war, however, it should become accepted as a necessity by the time it reaches large proportions. Inclosure 2 shows that returnees can be absorbed in newly activated units, as long-term students or by reassignment to the structure spaces planned for U. S. operations. While students are discounted for computation purposes, it is estimated that should mobilization progress essentially as planned in the JOEWP of July 1952, all returnees to the United States through D/28 can be reassigned to newly activated units or Zone of the Interior operations. Subsequent to that date, when the last division forces have been mobilized, the maximum number that can be reassigned is limited by the spaces available in the Zone of the Interior structure. In this plan, it is estimated that all returnees through D/48 can be reassigned within the Zone of the Interior.

7. In summary, this plan considers relief of combat personnel based on a reasonable chance of survival, an optimum amount of intra-theater reassignments and the return of personnel to the United States based on the capability of the overseas theater to absorb relieved combat men plus an administrative allowance for the return in the interest of the Service of other deserving individuals. In addition, all returnees are utilized in the Zone of the Interior military service. Manpower costs at D/48 are estimated (paragraph 9, Inclosure 1) as 28 1/2,000 men.

#### 8. Conclusions

a. Relief and/or return (rotation) replacements should be provided to overseas theaters in sufficient quantity to offer the combat soldier a 50 percent chance of survival.

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b. Relief based primarily on battle casualty experience is in direct proportion to the hazard and intensity of combat--the exposure to enemy action.

c. Reassignment of relieved personnel within an overseas theater should generally be from front to rear, except that all rear-area personnel should be permitted to volunteer for front-line combat.

d. Relieved combat personnel should be given on-the-job training or be retrained as necessary by the theater replacement command to fill a vacancy in the rear areas.

e. When the number of relieved combat personnel exceeds the requirements of the overseas rear areas, the surplus should be returned to the Zone of the Interior. Return should be on a merit basis with credit being given to those individuals who have experienced a tour of front-line combat.

f. Some administrative provision must be made for conditions of hardship and length of service in noncombat areas or zones.

g. Plans should be based on returnees not being subject to involuntary reassignment to combat duty outside the continental United States within one year of their departure from an overseas theater.

h. With the exception of highly trained specialists, WAC's and physically handicapped (profile C) personnel, the great majority of replacements shipped overseas should be trained for and assigned to combat arms units.

i. Army mobilization plans should be reviewed and changed where necessary to insure provisions for relieved personnel of adequate overseas rest and recuperation facilities; appropriate training personnel, facilities and installations both in the Zone of the Interior and overseas; and optimum utilization of relieved combat personnel.

j. That implementation of a plan based on this concept would result in the following estimated increase in the ceiling strength of the Army:

D/7	42,000
D/12	42,000
D/24	42,000
D/36	144,000
D/48	284,000

k. Return factors and criteria upon which the factors are based should be used for planning purposes only.

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9. Recommendations

a. That this concept be approved as the basis for Army mobilization planning.

b. That the conclusions above be accepted as representing the Army position in future actions designed to reflect equitable or uniform programs throughout the Services.

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Tab F

Incl 1

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#### ROTATION REQUIREMENTS

1. This paper provides a basis for the computation of rotation requirements under the following conditions:

- a. Normal overseas tour and rotation (return) then in effect will be suspended on D-Day.
- b. Return of personnel from overseas will not commence until after D+6 months.
- c. Relief and return (rotation) replacements will be made available to combat theaters in sufficient numbers to offer the combat soldier a reasonable chance of survival.
- d. Front-line veterans equal in number of the relief replacements received within the theater will be relieved from close combat, retrained as necessary within the theater, and reassigned to less hazardous duty.
- e. When sufficient front-line troops have been relieved and reassigned within the theater to create a surplus in the rear areas, those determined as excess to the overseas requirements will be returned to the United States.
- f. Some allowance must be made for the limited return of personnel other than front-line veterans.
- g. The number of theater generated marginal (physically handicapped) personnel not evacuated to the Zone of the Interior will be essentially equal to the number of rear area personnel who volunteer for front-line duty (estimated as 250 per division force per month).
- h. Regardless of current or future enemy capabilities to conduct unconventional warfare, the front-line combat soldier will in general be subjected to a measurably greater degree of hazardous service than will other individuals in the Army.
- i. World War II casualty statistics as recorded in FM 101-10 provide the best available basis upon which to develop projected losses for mobilization planning purposes.
- j. The overseas theater division slice (division force) is approximately 50,000.

2. In planning relief requirements, the basis used below is to give the member of a unit a 50 percent chance of survival, i.e., to relieve him for reassignment to the rear when 50 percent of those who joined his unit with him have been killed in action, are missing, captured, mutilated, or have died of wounds. The highest percentage of casualties occurred in rifle companies. Therefore, in order to provide for a minimum 50-50 chance of survival, the casualty rates applicable to a rifle company are used.

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TAB F Incl 1

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a. Using the permanent theater battle casualty rate of 7.8 percent per month and assuming that 1000 replacements are assigned to rifle companies during any one month, the following computation shows that by the end of the eighth month of combat, approximately 50 percent of the original force can be expected to have become permanent battle losses. The remainder must be relieved.

Month	Remainder of Original 1000 Replacements
D	1000
D/1	922
2	850
3	784
4	723
5	667
6	615
7	567
8	523

b. Applying this to the theater division slice of which rifle companies total 5260, we find that in order to provide for a 50 percent chance of survival and to maintain 5260 in combat in rifle companies requires a monthly input of 860, of whom 450 are relieved and reassigned to the rear areas by the end of the eighth month. Computations follow:

Month	Remainder of Original 1000	Adjusted to 5260 Strength
D	1000	860
D/1	922	790
2	850	730
3	784	675
4	723	622
5	667	573
6	615	528
7	567	486
Total	6128	5260
Relieved by the end of the eighth month	523	450

c. Relief factor for a 50 percent chance of survival:

(1) Total permanent monthly battle casualties for rifle companies in the division slice is 7.8 percent of 5260 or 410 per month.

(2) Relief replacement requirements for rifle companies in the division slice are 450 per month.

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(3) The ratio of relief replacements to permanent battle casualties is 450 to 410. Relief replacements, accordingly, are 110 percent of the permanent battle casualties.

d. Based on casualty data contained in FM 101-10, it has been determined for Army Mobilization Plan III (Consistent with JOEWP, July 1952) that permanent Army battle losses will approximate 856 per month for each division fully engaged in combat. Applying the 110 percent factor, the relief requirement is established at 950 per month for each division combat month. This number must be reassigned to available rear area spaces or shipped from the theater.

3. The necessity for the most efficient utilization of manpower dictates that a margin be allowed theater Army commanders within which they can operate to relieve local conditions. Such conditions are unpredictable to any degree of accuracy and are visualized primarily as administrative determinations to be resolved by individual command action. They may result from the operation of the relief program (paragraph 2 above) creating an overage in grades, the return of special category personnel, command action to transfer personnel from lonely, uncomfortable or unpleasant assignments, or other actions within the prerogative of theater Army commanders to insure the most effective use of personnel and the proper care and welfare of the command. In recognition of these contingencies, a nominal allowance has been made for the constant return to the Zone of the Interior of 250 per month for each division force present in the theater or 0.5 percent of the overseas theater strength. This total added to the total relief requirement (paragraph 2 above) represents the number of replacements required to support the relief and return systems of the overseas commands. The monthly requirement for returns from the theater is 250 times the number of divisions in the theater (or 0.5 percent of theater strength) plus the number that relieved combat veterans exceed the rear area spaces available within the theater to which they can be reassigned.

4. Available rear area spaces which can be filled by relieved combat veterans, based on a 24,000 overseas rear area division slice (from AMP II) are estimated as follows:

a. Increase in theater bulk overhead of approximately 100 per division in the theater until theater build-up is complete.

b. Seventy percent of the normal rear area attrition losses or 120 per month for each division in theater.

$$(0.7\% \times 24,000 \times 70\% = 118, \text{ say } 120)$$

c. Twenty-five percent of the rear area portion of constant rotation spaces or 30 per month for each division in the theater.

$$(25\% \times 0.5\% \times 24,000 = 30)$$

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d. Ten percent of the authorized spaces for new rear area units deployed to the oversea theater in support of additional divisions. Based on a 24,000 rear area slice for each division deployed overseas, this amounts to 2400 for each new division deployed.

$$(10\% \times 24,000 = 2400)$$

e. Note that a, b and c total 250 spaces which remain constant until theater build-up is complete.

5. Implementation of any relief plan should not provide for the relief of personnel after only one month of combat; likewise, it would be impracticable to plan for the wholesale release of all the old timers eligible for relief in one unit at the end of the eighth month of combat (paragraph 2b). As a compromise, this plan computes requirements based on the period five months prior.

6. Oversea returnees are thus estimated in the following manner:

a. Let R = Number of returnees.

X = Number of divisions in the combat area the fifth preceding month.

Y = Number of additional divisions deployed overseas the next preceding month.

Z = Number of divisions in the theater the next preceding month.

f = Factor indicating the percentage of divisions in the combat area actually engaged in full combat or the degree of combat experienced by each division deployed in combat. "f" factor shown below is used for projecting permanent Army battle losses which, in turn, determine relief requirements. ~~\_\_\_\_\_~~

Europe - 100% from D-Day through D/25  
80% from D/26 through D/37  
70% from D/38 on

FECOM - 100% from D-Day through D/3  
20% from D/4 on

b. Then, the estimated numbers returning to the Zone of the Interior, based on the above concept are determined by use of the following formulae:

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(1) Europe:

(a) D/6 through D/41:

$$R = 250Z \div \left[ (950X)(f) - (2400Y \div 250Z) \right]$$

(b) D/42 on (theater build-up complete):

$$R = 250Z \div \left[ (950X)(f) - 150Z \right]$$

(2) FECOM:

$$R = 250Z \div \left[ (950X)(f) - 150Z \right]$$

7. Application of this formula to the JOEMP, 1 July 1952, Division Mobilization and Deployment Schedule ~~SECRET~~ results in the following phasing of overseas returnees:

<u>Date</u>	<u>Returnees</u>	<u>Date</u>	<u>Returnees</u>
D/7	8	D/28	11
8	8	29	12
9	8	30	13
10	8	31	14
11	8	32	15
12	8	33	17
13	8	34	21
14	8	35	23
15	8	36	25
16	8	37	27
17	8	38	34
18	8	39	35
19	8	40	36
20	8	41	40
21	8	42	46
22	8	43	52
23	8	44	54
24	8	45	59
25	10	46	59
26	10	47	59
27	10	48	59

- NOTES:
1. Losses occur within the overseas theaters during the month indicated.
  2. Losses through D/24 have been adjusted slightly to reflect an even monthly flow.
  3. A 30,000 surge has been provided between D/31 and D/37 to allow for unforeseen contingencies.

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8. An interpretation of this schedule indicates that it will provide for:

a. The relief from combat of personnel operating habitually forward of ~~battalion~~ <sup>division</sup> command posts after an average of 4.6 combat months. All personnel assigned for duty within this area would be relieved after 7 combat months. Assuming that each division is fully engaged in combat 75% of the time in an active combat area (theater) and 25% of the time in a semi-combat area (theater), the time spent in front-line combat prior to relief would be:

Combat Area                      6 months average

Semi-Combat Area            18 months average

b. The return to the Zone of the Interior of personnel relieved from front-line combat after an average 24 months total elapsed time in the overseas theater.

c. The return to the Zone of the Interior of personnel in the combat support zone (area between ~~battalion~~ <sup>division</sup> command post and Corps ~~area~~ <sup>rear</sup> boundary) after an average 33 months in the overseas theater.

d. The return of rear area personnel (rearward of Corps rear boundary) and personnel in noncombat areas at the monthly rate of 0.5% of the strength in place by phase date.

9. Cost in Manpower:

a. Assumptions:

(1) All relieved front-line personnel will be given 15 days rest and recuperation leave prior to reassignment to rear-area units or installations.

(2) That 50% of those being relieved from combat can be absorbed in rear areas without further training or with on-the-job training.

(3) That the remaining personnel will require an average six weeks training.

(4) That overhead will approximate 30% of the trainee load.

(5) Returnees are available for reassignment within the Zone of the Interior two months following their departure from the overseas theater.

(6) Replacements for returnees are shipped from the United States one month prior to date required in overseas area.

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b. Intra-theater cost in man-months:  
(Column (3) of subparagraph d below)

(1) Rest and recuperation cost equals 50% of those being relieved for reassignment to rear areas in any one month.

(2) Training cost equals 75% of the number being relieved for reassignment to rear areas in any one month.

$1.5 \times 50\%$  of those being relieved that month.

(3) Overhead cost equals 23% of the number being relieved for reassignment to rear areas in any one month.

$30\% \times 1.5 \times 50\%$

c. Inter-theater cost in man-months:  
(Column (5) of subparagraph d below)

(1) Travel, leave and processing of returnee to Zone of the Interior is two times the number being rotated.

$2 \times 100\%$

(2) Travel and processing cost of the overseas replacement for the returnee is equal to the number of returnees who leave the overseas theater plus 2 weeks processing and leave in the United States.

$1.5 \times 100\%$

d. Recapitulation of Personnel Costs in thousand man-months for month indicated:

(1) Month	(2) Number Relvd	(3) Intra-theater Relief Cost			(4) Number Returned to ZI	(5) Inter-theater Return Cost		(6) Total Cost
		(a) Rest & Recoup	(b) Train- ing	(c) Overhead		(a) Return	(b) Replace ment	
D/7	9	5	7	2	8	16	12	42
12	9	5	7	2	8	16	12	42
18	9	5	7	2	8	16	12	42
24	9	5	7	2	8	16	12	42
30	9	5	7	2	13	26	20	60
36	38	19	29	9	25	50	37	144
48	52	26	39	12	59	118	89	284

10. Practical application of relief system in a hypothetical active overseas theater:

a. An equitable system which is administratively simple would under actual operating conditions, allocate relief replacements to a unit

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based on its battle casualty experience. Such a system will for all practical purposes limit relief to close combat personnel yet will apply equally to those combat support units with exceptionally high casualty rates. Thus, an artillery battery and a rifle company receiving the same number of battle casualties during a given period will receive the same number of replacements to support relief. Normally, however, relief will be more rapid in forward areas, yet the man relieved from a rifle platoon over a shorter period of time will have been exposed to the same amount of danger as a man relieved from a searchlight battery.

b. Use of the total permanent battle casualty rate would cause administrative difficulty in the lower echelons, as company morning reports may not accurately reflect the missing in action as opposed to deserters or DOW for which reliance must be placed on receipt of hospital reports. The killed in action are more accurately reported than other casualties. As they bear a fixed relation to the total casualties and therefore to the intensity of combat, the number of KIA is considered to be most practicable for use in the field in determining the relief allocations.

c. Within the theater, administration of this system would be extremely simple and would require the use of no statistics that are not presently in use.

d. Intra-theater relief plan.

(1) Relief Factor - Based on the number of replacements to support relief ~~received~~ received within the theater, the relief factor will be determined as the ratio of relief replacements to the previous five months' total killed in action, e.g.:

Total allocation of replacements to theater for February	73,000
Estimated total theater losses for February	<u>50,000</u>
Then replacements to support relief are	23,000
Total theater KIA, September thru January	49,000
Then the ratio of relief replacements to KIA for past five months, or the relief factor is	47%

(2) All units will receive relief replacements equal to this percentage of their total KIA for the past five months. Replacement will be reallocated to subordinate units according to the same percentage. Thus, a division with a total of 1,000 KIA from September thru January will receive 470 relief replacements in February. It will allocate 235 of these replacements to a regiment that was hard-hit during the period with 500 KIA. These will be reallocated on the same basis to the companies. The Service Company with only 2 KIA during the period will receive one replacement. Company B with a total of 42 KIA from September through January will receive 20 replacements in February.

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(3) Upon arrival at the company level, the company commander will relieve an equal number with the longest most hazardous service. The company commander will use as a guide the previous casualty rates of his platoons. However, he will not be restricted in his command prerogative by a rigid selection system, but will be permitted to select those most deserving or those who require relief. Abuses of this system by individual commanders will undoubtedly exist, as they do in all matters involving unit and individual welfare, but this is a subject for command supervision in all echelons.

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Tab C

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FILE NO. G1 334 Jnt Log Plan  
Conte (7 Jan 53)

SUBJECT: Item to be Considered by the Joint  
Logistics Plan Committee (LPGM-631-53)

TO: Army Member, JLPC  
Col G. C. N. Lodoen, G-4

FROM: ACoFS, G-1

DATE: 3 Feb 53 COMMENT NO. 2  
Lt Col Schiltz/77409/zs

1. It is not considered advisable to republish Joint Service Rotation, Over-strength and Replacement Factors at this time.
2. The position of the Army is that the rotation factors should be reviewed first to determine their realism and, secondly, to determine if application of the published factors will result essentially in equal treatment of all individuals throughout the Services. Pending such a review, the Army will continue to use the published factor in computing rotation requirements for joint planning purposes.
3. It is recommended that the attached comments prepared as an LPCM be signed by the Army member for presentation to the JLPC.

FOR THE ACTING ASSISTANT CHIEF OF STAFF, G-1:

1 Incl  
LPGM-631-53 w/c  
1 Incl added  
Proposed LPCM

H. D. IVES  
Colonel, GS  
Chief, Plans Division

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TAB G

Tab G

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MEMORANDUM FOR: Rear Admiral Robt L Campbell, USN

Rear Admiral E. E. Yeomans, USN

Brig General W. T. Hudnell, USAF

SUBJECT: Revision of LPCM-509-51 (12 Sep 51)

(Review of Joint Service Rotation, Overstrength  
and Replacement Factors)

REFERENCES:

a. LPCM 1601-52

b. LPCM 595-52

c. LPCM 1604-52

1. It is considered necessary that any joint or jointly-agreed factors used to project rotatees during a period of full mobilization should reflect a most realistic, austere and uniform rotation program throughout the Services. The limitations on the manpower pool, pressure to obtain the most economical and efficient use of available manpower, morale implications and public opinion, will demand such considerations and, specifically, equitable treatment of uniformed personnel throughout the Department of Defense.

2. As expressed in LPCM 1601-52, 20 August 1952, the Army is concerned about the realism of the rotatee factors published in LPCM-509, 12 September 1951. Such concern developed following the application of the jointly-agreed Army rotatee factor to a force deployment used in the July 1952 Army Mobilization Capabilities Study. The resultant personnel returning from overseas far exceeded the capability of the Army to assimilate them within the Zone of the Interior troop units or installations.

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3. The Army is still concerned about the realism of the rotatee factors, which are now proposed for republication without change. Specific comments on the new Memorandum (LPGM-631-53) with Enclosures and Appendixes follow:

a. The proposed extension of "Zone of the Interior" to include "Those U. S. bases, territories and possessions outside the Continental United States where a duty assignment could be regarded by the Service as a proper substitute for service in the Continental United States" offers little relief to the Army. Under wartime conditions, relatively few spaces of this category exist within the Army troop basis.

b. The addition to the definition of "Rotatees" of the sentence "Rotatees are not to be computed as losses to the Services" has important connotations. It is assumed that the intent is that no discharges will be generated either directly or indirectly by the application of rotation criteria or factors. If such is the case -- and the Army agrees with this logic -- the Army rotatee factor necessarily would be revised downward to eliminate projected discharges. It would then be expected that the other Service rotatee factors would be recomputed under conditions commensurate with the Army to reflect, to the closest possible degree, equal treatment of all military personnel. As a minimum, personnel of all Services deployed in the same area under similar operating conditions should become eligible for rotation after like periods of service.

c. General Assumptions

(1) The Army does not consider it practicable to plan on the rotation between D/6 and D/24 of all personnel who were deployed

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overseas on D-Day. It is recommended that the following be substituted:

"All personnel deployed on D-Day to be frozen overseas from D-Day to D+6 months. Rotation eligibility subsequent to D+6 months will be in accordance with the criteria established by the respective Services."

(2) The Army strongly objects to the elimination in the General Assumptions of para 3a(5) of LPGM-509 which is quoted as follows: "Rotation precedence will be assigned personnel commensurate with the expected degree of exposure to enemy action." This general assumption is considered to be in consonance with the approved joint guidance contained in the Joint Logistics Policy and Guidance Manual (FM 110-10; JANALP; AFM-4), June 1952, that for mobilization planning purposes the basic determinant of eligibility for rotation from overseas should be attrition rates or other definable conditions of hardship or hazard; that as a guide the following priorities may be used:

- (a) Personnel in combat area.
- (b) Personnel in combat-support area and
- (c) Personnel in noncombat area.

This criteria, if applied as the basic determinant throughout the Armed Services should result in essentially equal treatment of all uniformed personnel. Differences in operational and organizational requirements necessarily complicate the procedure. It is, however, believed to be possible for the Services to agree on the criteria which should be used by all Services in determining the extent of rotation necessary to satisfy the conditions which require it. In the absence of agreement on a "Terms of Reference," it would then be necessary to seek additional or more specific guidance from the JCS or Department of Defense.

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(d) Specific Assumptions

(1) As the Army no longer considers it practicable to plan for the rotation of all personnel to the ZI after an average 24 months' tour of oversea duty, it is evident that the specific assumption applicable to the 3.4 factor (based on an average 24 months overseas) no longer is valid. The Army now is assembling data upon which to develop additional guidance for mobilization planning. Pending completion of this project, the Army, as an interim measure, is using a factor of 1.7 to develop rotation requirements for unilateral planning purposes. However, as this factor now has little basis in fact, other than it is considered to be much more realistic for long-range Army planning, the Army is not prepared to submit it as a joint or jointly-agreed factor. It may be expected that upon completion of the current project, the Army will, in the absence of other guidance, be prepared to submit recommended criteria to be used for a more realistic projection of rotation requirements.

4. In view of the above, and pending a determination of the criteria to be used in order to reflect equality in the treatment of all individuals in the Armed Forces, the Army cannot justify the validation of any jointly-agreed Service rotatee factors at this time.

5. It is recommended that:

a. The criteria now used <sup>(LPGM 509)</sup> to project rotation requirements be reviewed within the Joint Staff.

b. A determination be made as to the criteria which should apply to all Services in order to reflect equality of treatment of all uniformed personnel and yet not create conditions which will result in discharges from the Services.

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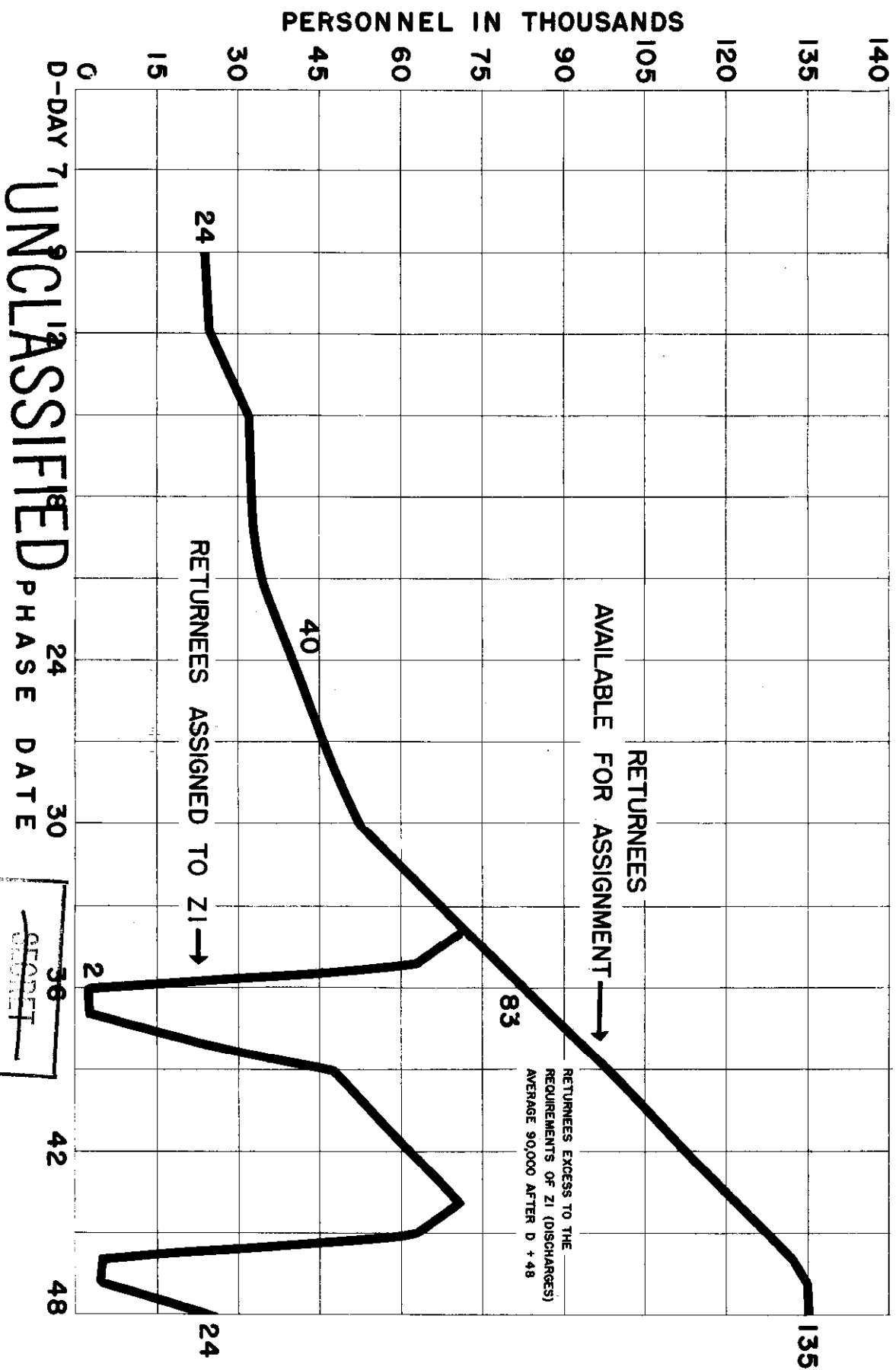
GEORGE O. H. LODGEN  
Colonel, USA

Tab H

# UNCLASSIFIED RETURNEE REASSIGNMENTS UNCLASSIFIED

## WITHIN THE ZI

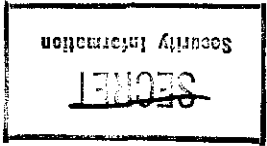
### JOINTLY-AGREED 3.4 FACTOR



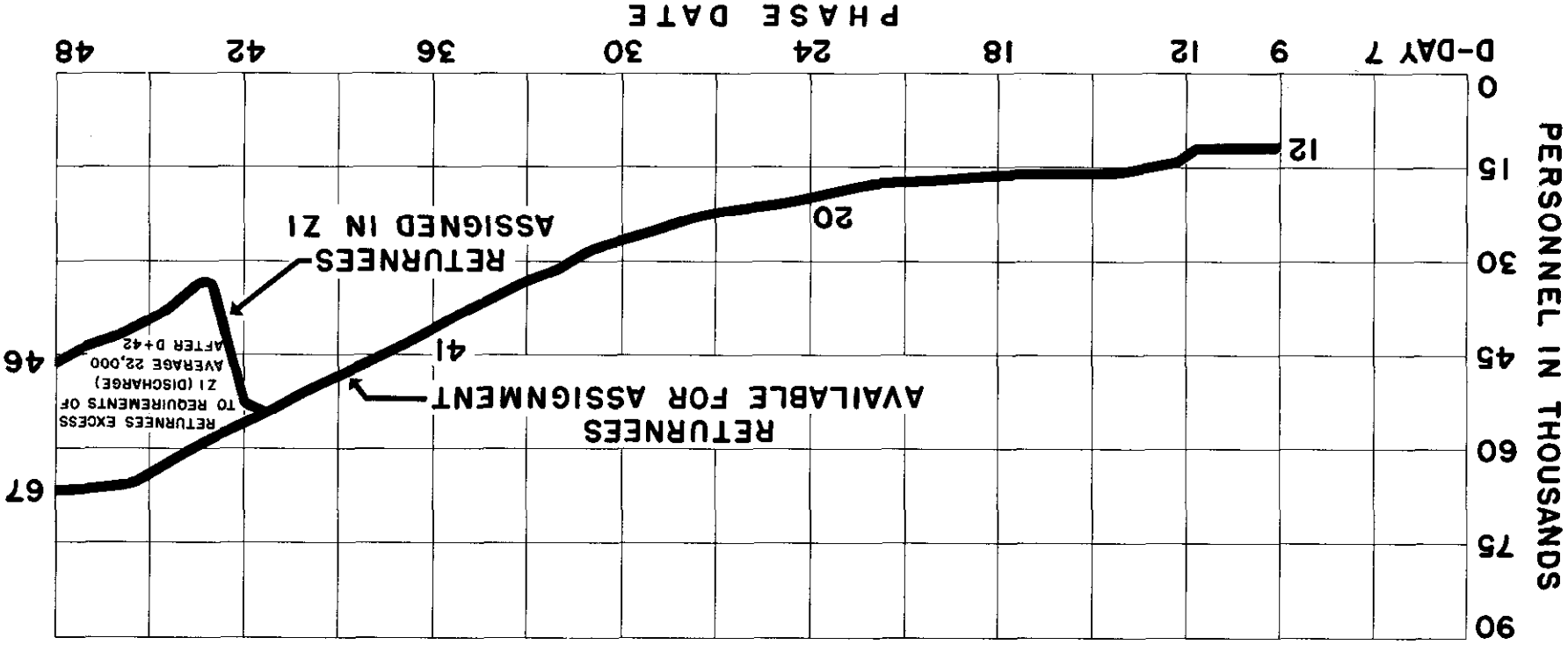
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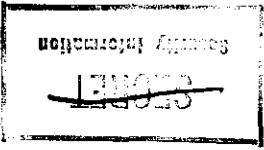
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# RETURNEE REASSIGNMENTS WITHIN THE Z1 INTERIM 1.7 FACTOR

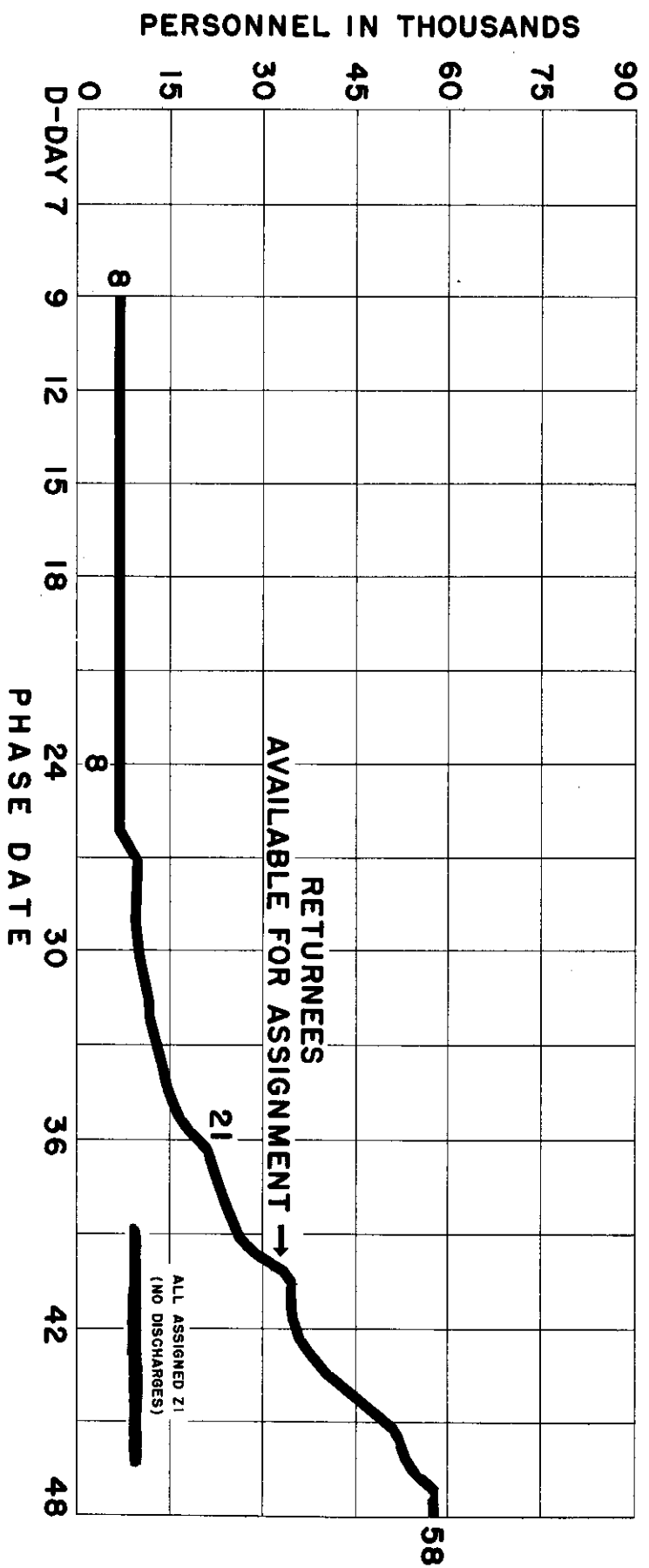


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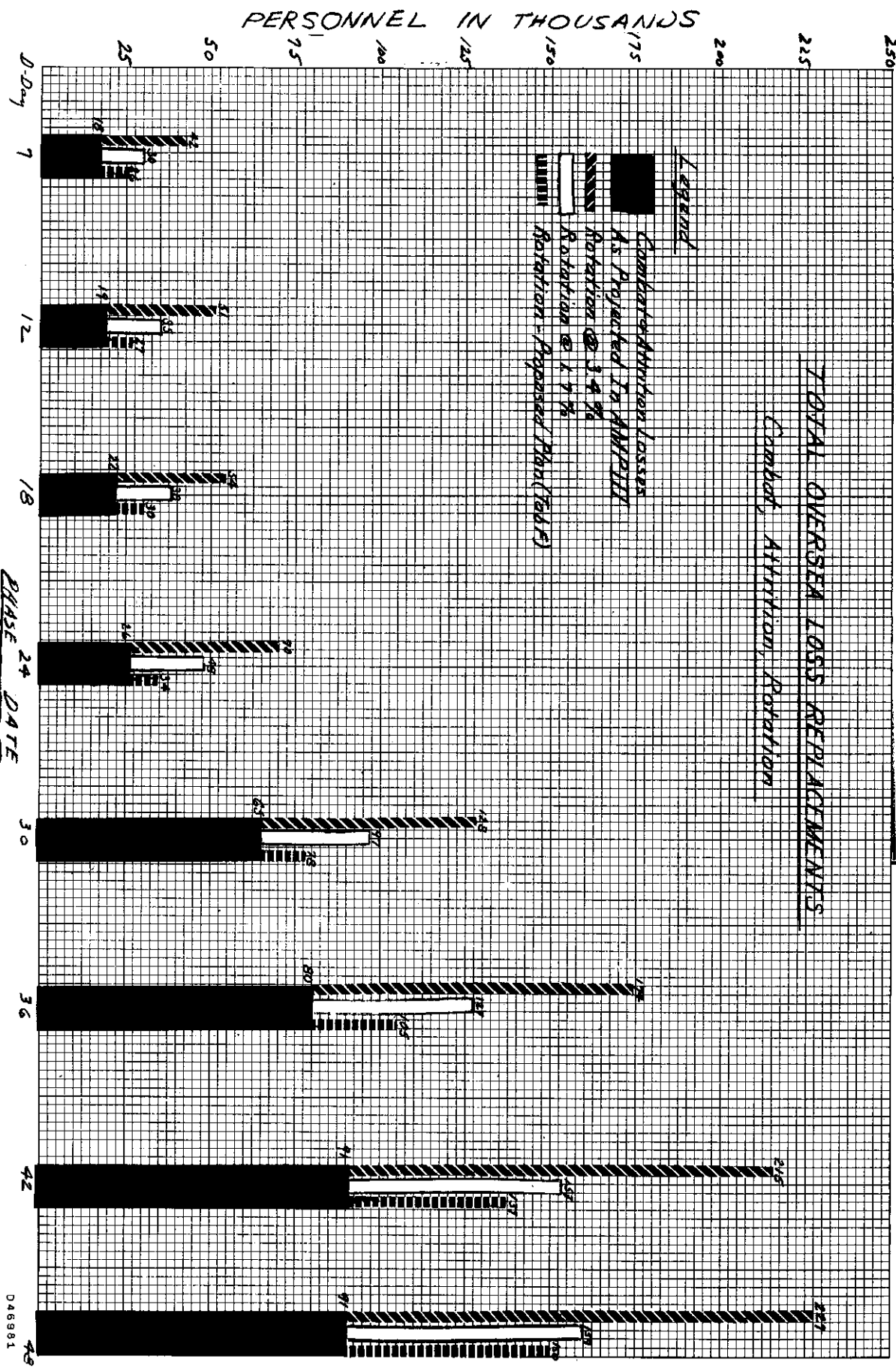
# RETURNEE REASSIGNMENTS WITHIN THE Z1 PROPOSED PLAN (TAB F)



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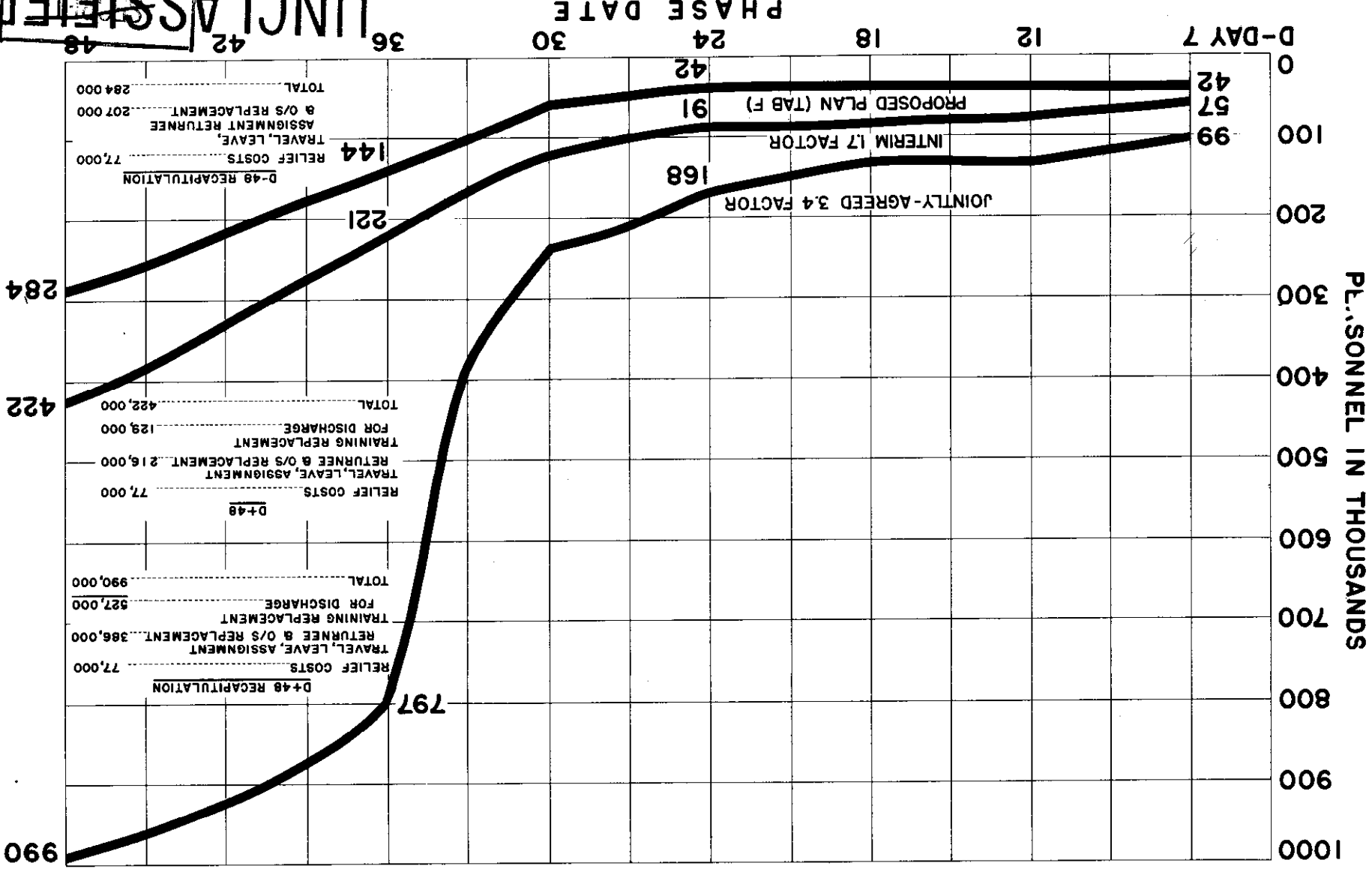


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# PERSONNEL COSTS AT DATE INDICATED FOR RELIEF AND RETURN TO ZI

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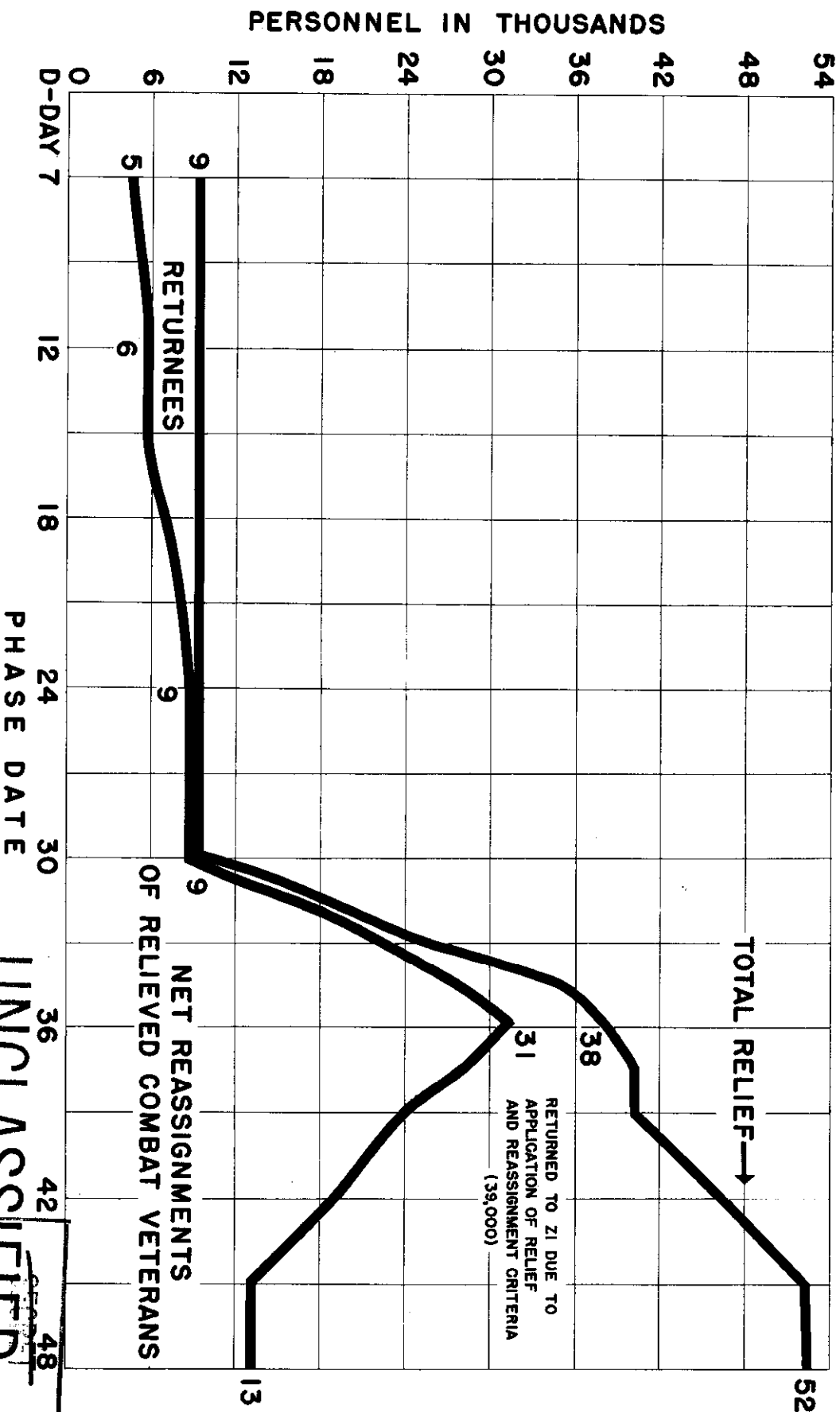
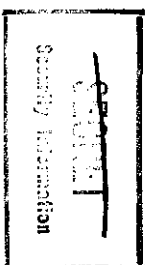
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# RELIEF AND REASSIGNMENTS WITHIN OVERSEAS THEATERS

BASED ON CHANCE OF SURVIVAL  
PROPOSED PLAN (TAB F)



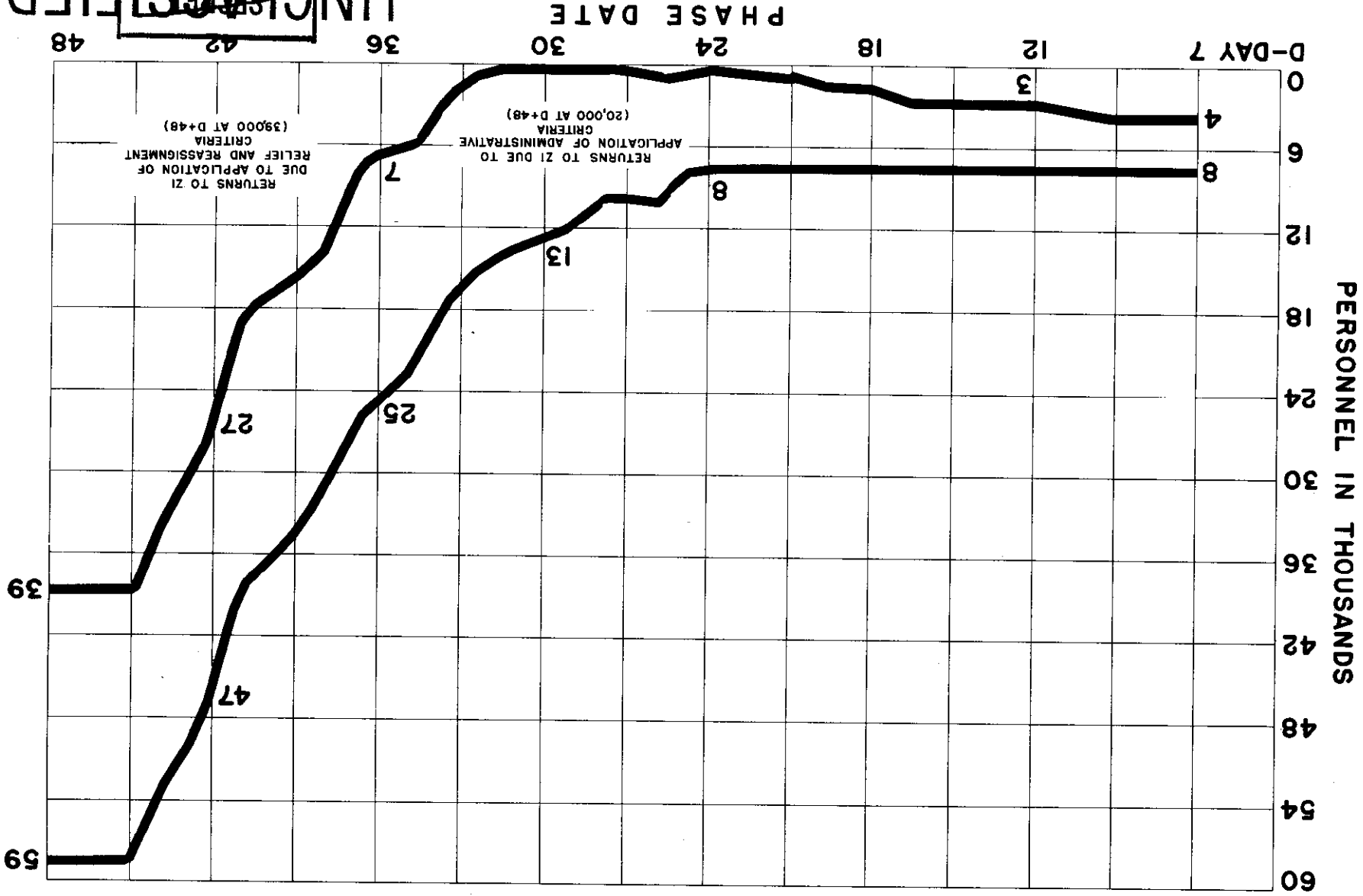
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PERSONNEL RETURNED TO ZI  
PROPOSED PLAN (TAB F)

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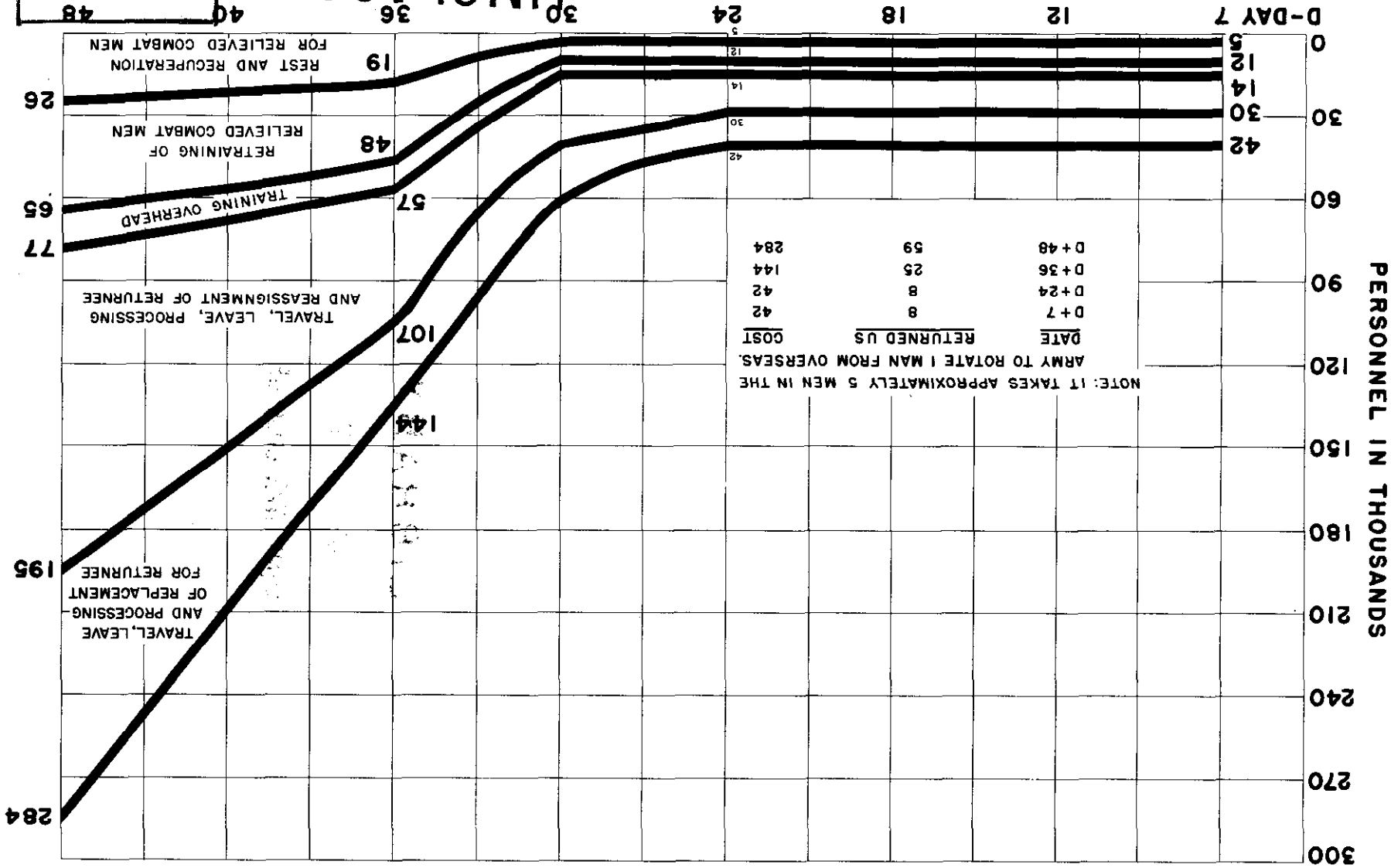
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# PERSONNEL COST BREAKDOWN AT DATE INDICATED

PROPOSED PLAN (TAB F)

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